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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,774	09/05/2003	Eric W. Kendall	47526/P029D1/10311741	7232

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12/06/2004

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EXAMINER
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LORENZO, JERRY A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/655,774

Applicant(s)

KENDALL ET AL.

Examiner

Jerry A. Lorengo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/20/04&03/29/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

(1)

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

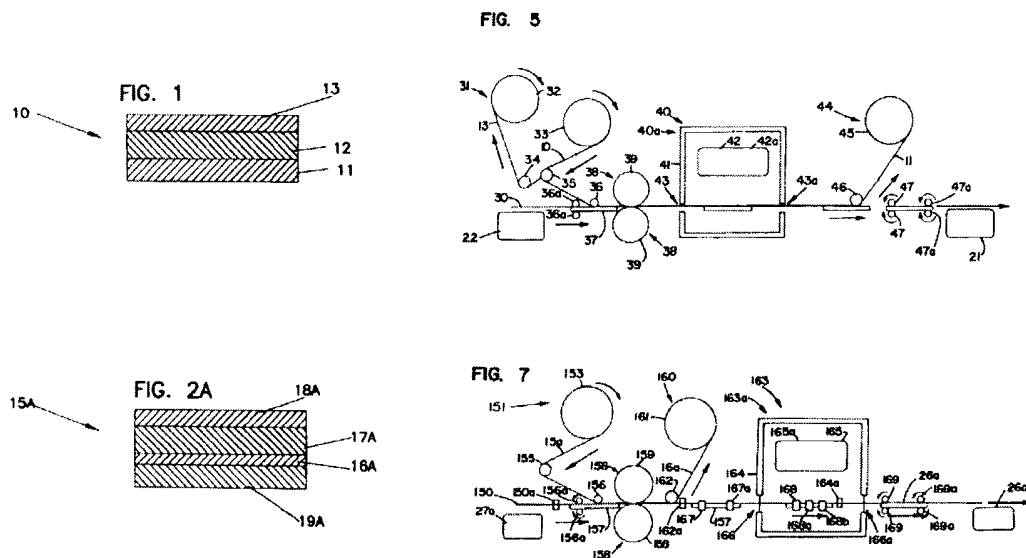
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 21, 22, 24-27, and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,001,893 to Vaidya et al. in view of U.S. Patent No. 4,801,495 to van der Hoeven.

Regarding applicant claim 21, 26 and 31, Vaidya et al. disclose a method for applying a fade and damage resistant coating (column 4, lines 47-52) onto a decorative substrate comprising the steps of (Figures 1, 2A, 5 and 7; column 18, lines 9-48; column 26, line 51 to column 29, line 3):

- (1) Providing a release liner (carrier base) 16A, 17A, 19A;
- (2) Applying a protective topcoating composition layer 18A comprising a mixture of a monomer, an oligomer, a polymerization initiator, and various additives (column 9, line 8 to column 14, line 12; specifically column 9, lines 9-20; column 10, lines 52-54; column 10, lines 38-51; column 13, lines 14-18);
- (3) Providing a decorative substrate 157 (column 18, lines 59-65);

(4) Contacting the protective topcoating composition layer 18A carried on the release liner 16A,17A,19A with the decorative surface of the substrate 157 under the effects of heat and pressure (supplied by transfer lamination roller pair 158,159) whereby the protective topcoating composition layer 12 is bonded and transferred to the surface of the decorative substrate 157. The method of Vaidya et al. is illustrated below:



Although Vaidya et al. do not specifically disclose, as per applicant claims 21, 26 and 31, that the monomer and oligomer composition of the topcoating undergoes crosslinking simultaneously with the application of heat and pressure during transfer lamination, it would have been obvious to one of ordinary skill in the art that at least partial or initial crosslinking would occur motivated by the fact that Vaidya et al. disclose that the polymerization initiator may be actuated by heat (column 12, lines 38-51), and that the transfer lamination rollers, as per applicant claims 24 and 29, can be heated up to 150°C (column 22, lines 1-8).

Although Vaidya et al. do not specifically disclose that the decorative substrate, as per applicant claims 21, 26 and 31, is a decorative layer, such as those utilized in the formation of decorative panels, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize the method of Vaidya et al. for the application of crosslinkable topcoats to such substrate motivated by the fact that van der Hoeven, drawn to decorative panels, disclose

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that it is known to provide such substrate with crosslinkable polymeric topcoats based upon monomer and oligomer acrylate mixtures (abstract; column 3, line 9 to column 4, line 2).

Although Vaidya et al. disclose, as per applicant claim 34, that the crosslinkable topcoat is applicable to the substrate via transfer wherein the release sheet is removed either before or after total crosslinking (column 19, lines 60-66), they do not specifically disclose, as per applicant claim 26, that the topcoat transfer process comprises the preparation of a plurality of release sheet/topcoat/decorate substrate assemblies which are stacked up and then simultaneously bonded and crosslinked followed by removal of each of the assemblies and removal of each of the release liners. Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the continuous transfer process of Vaidya et al. to provide a batch-wise methodology for the processing of decorative laminates motivated by the fact that van der Hoeven discloses that it is well known and conventional in the decorative laminate arts to provide a plurality of laminate assemblies separated by release sheets (separating means) in a stack which is then processed batch-wise under heat and pressure after which each of the laminate assemblies are removed from the stack and separated from the release sheets (column 4, line 54 to column 5, line 14; column 5, line 51 to column 6, line 18).

Regarding applicant claims 22 and 27, Vaidya et al. disclose that the monomer and oligomer composition may comprise hexanediol diacrylate (column 11, line 39; column 11, line 47-48).

Vaidya et al. disclose that the topcoating composition comprises a monomer, an oligomer, a thermal polymerization initiator and other constituents such as wetting agents. Although they do not specifically disclose the specific weight percentages or specific thermal polymerization initiator or wetting agent, as set forth in applicant claims 25, 30, 32 and 33, the claimed amounts and specific materials would have been the result of routine experimentation by one of ordinary skill in the art at the time of invention taking into account the specific material being coated, the film thicknesses and film properties desired, crosslinking means and methodology, etc. Furthermore, the particular nature of the polymerization initiator and wetting agents employed, their composition, and/or physical properties would have been obvious to one having ordinary skill in the art based upon considerations of cost, availability, mode of application or environmental preference. Typically, selection of the proper materials may be

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achieved in the course of routine experimentation, by reference to standard technical literature, or through consultation with industrial or specialty component suppliers.

(2)

Claims 23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (1), above, in view of U.S. Patent No. 5,371,058 to Wittig, Jr. et al.

Although Vaidya et al., as combined above, disclose that the monomer and oligomer may comprise hexanediol diacrylate (or 1,6-hexanediol diacrylate) and urethane acrylate, respectively, they do not specifically disclose, as per applicant claims 23 and 29, that the oligomer is urethane diacrylate (column 11, lines 43, 49-50 and 52-54). Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize a urethane diacrylate in place of the urethane acrylate of Vaidya et al. motivated by the fact that Wittig, Jr. et al., also drawn to crosslinkable protective topcoats based on monomer and oligomer acrylate mixtures, disclose that it is known to utilize urethane diacrylate as the oligomer in combination with a monomer such as 1,6-hexanediol diacrylate (column 7, lines 28-40).

(4)

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (1), above, in further view of U.S. patent No. 3,853,686 to Clendenin.

Although van de Hoeven, as combined in section (1), above, discloses that the decorative layer may comprise a resinated decorative paper (column 1, lines 19-21), he does not specifically disclose, as per applicant claim 35, that the decorative layer is a melamine resin impregnated paper. Nonetheless, it would have been obvious to utilize a melamine resin in the resin impregnated decorative layer taught by van der Hoeven for use in the topcoat transfer methodology of Vaidya et al. motivated by the fact that Clendenin, also drawn to methods for the formation of such decorative laminates which may be provided with abrasion resistant topcoats on the decorative layer (column 1, lines 61-63), disclose that, as is well known, the decorative layer is impregnated with a modified melamine formaldehyde resin which are particularly useful because of their resistance to discoloring and translucent or transparent qualities (column 1, lines 32-40).

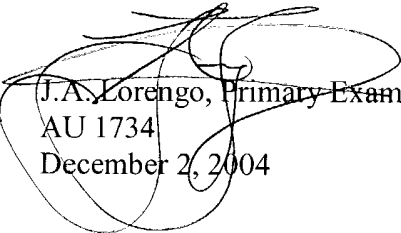
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(5)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (571) 272-1233. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J.A. Lorengo, Primary Examiner  
AU 1734  
December 2, 2004